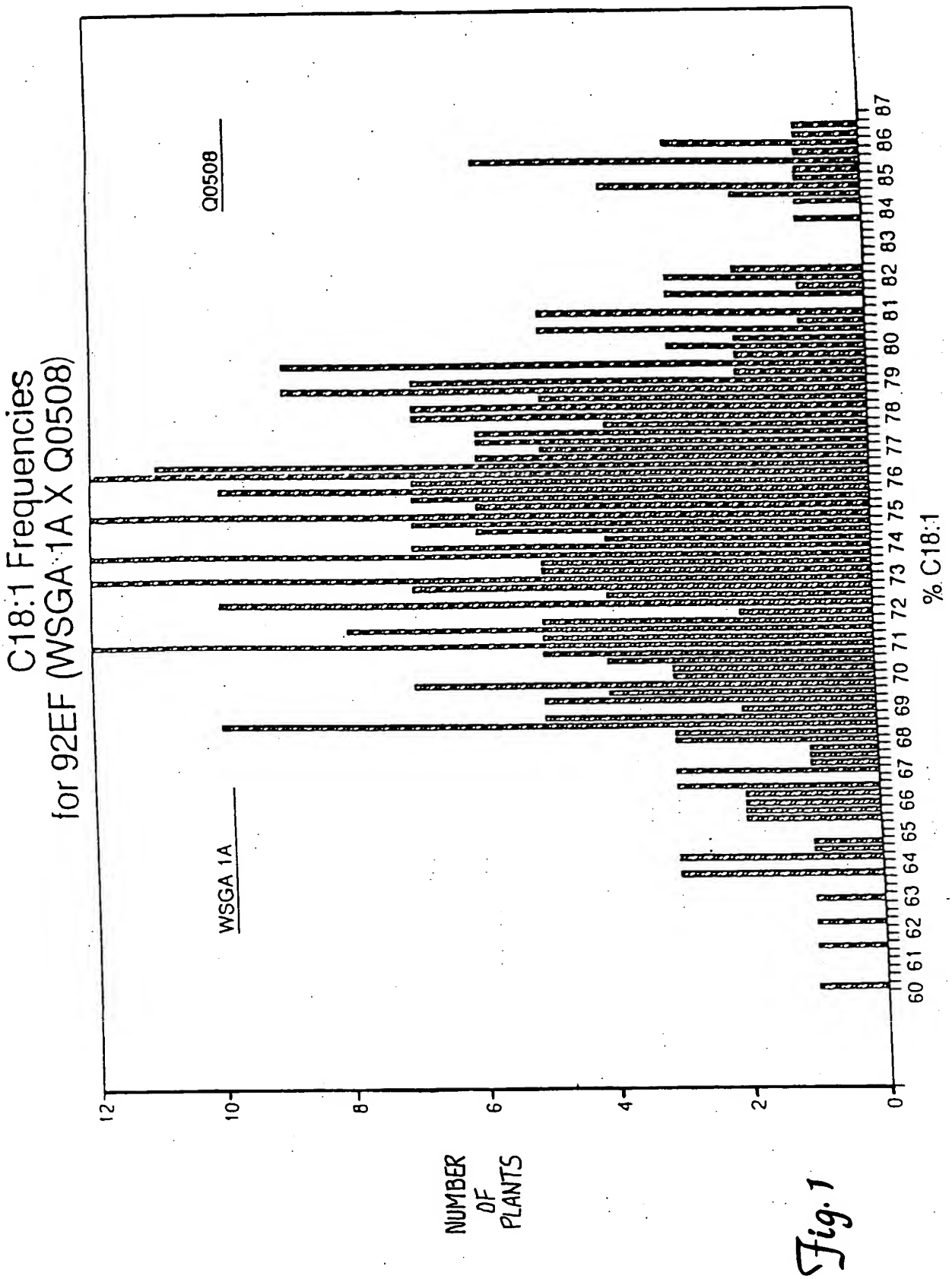
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for 92EF (WSGA 1A X Q0508)
Q0508
WSGA 1A
NUMBER OF PLANTS
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6
8
10
12
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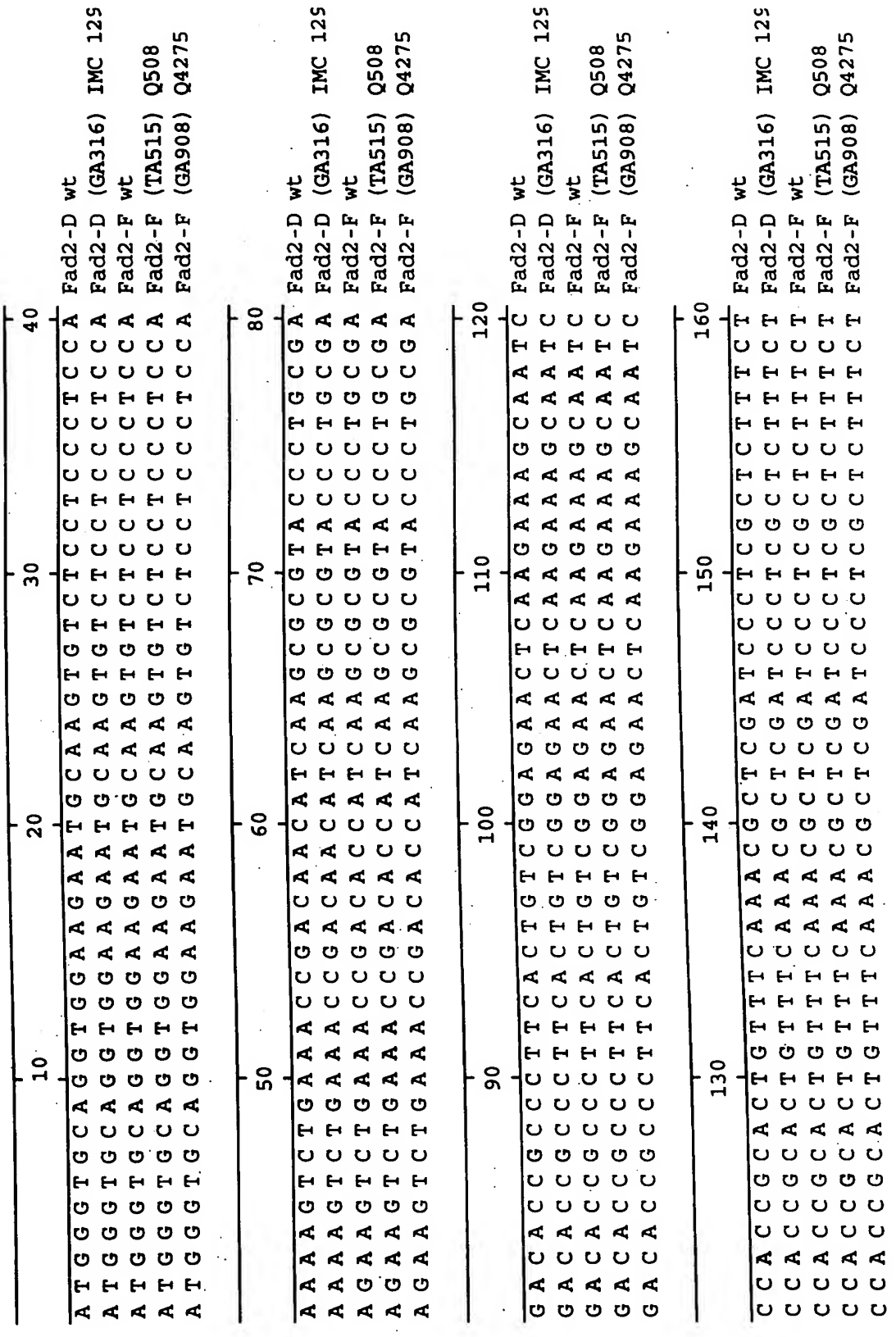
Fig. 1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1 ATGGGGTGCAGGTGGAAGAATGCAAGTGTCTCCCCTCCCA Fad2-F (GA908) Q4275
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41 AGAAAGTCTGAAACCGACACCAAGCGCGTACCCTGCGA Fad2-F wt
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41 AGAAAGTCTGAAACCGACACCAAGCGCGTACCCTGCGA Fad2-F (GA908) Q4275
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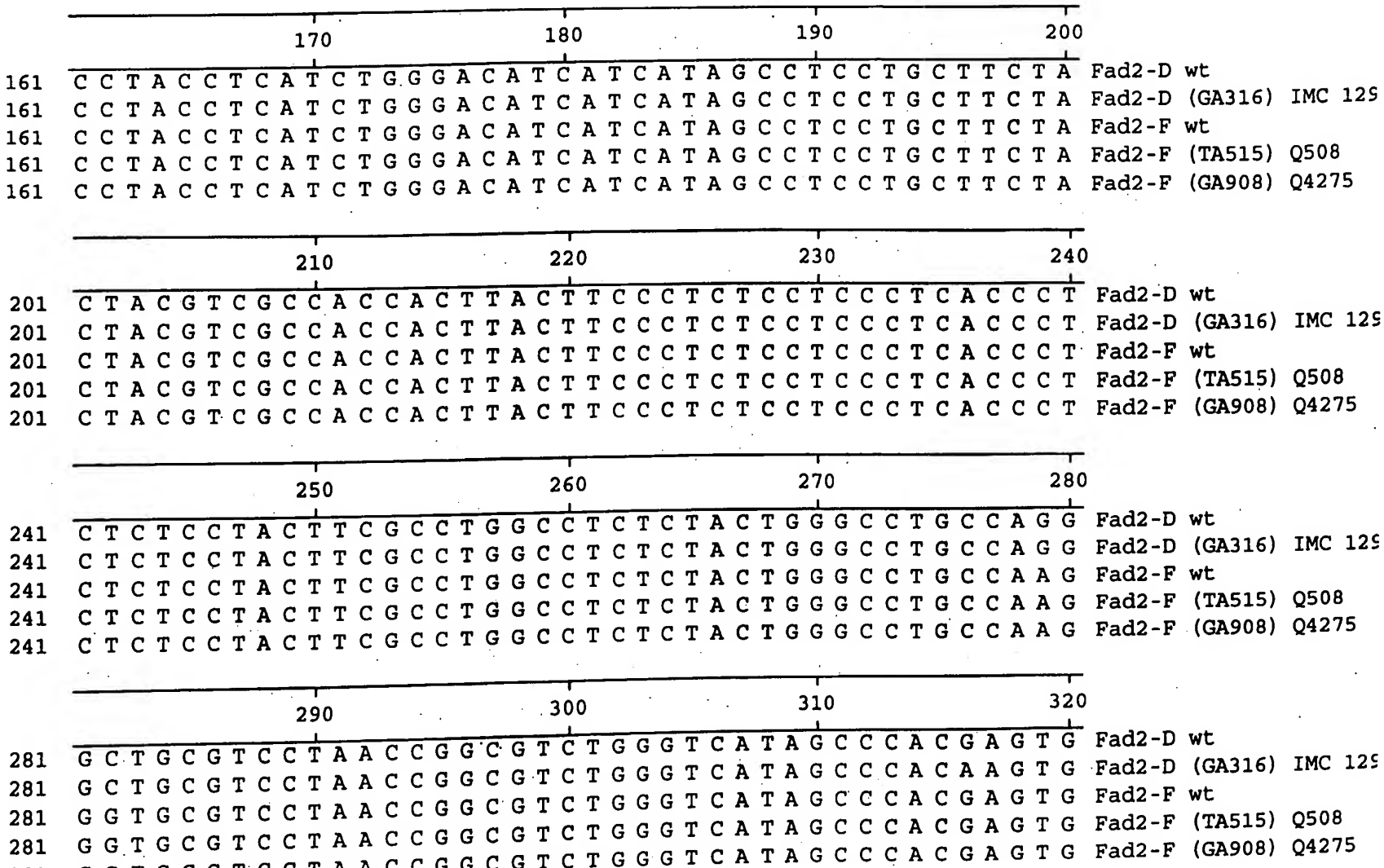
Fig. 2A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161 C C T A C C T C A T C T G G G A C A T C A T C A T A G C C T C C T G C T T C T A Fad2-F (GA908) Q4275
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201 C T A C G T C G C C A C C A C T T A C T T C C C T C T C C T C C C C T C A C C C T Fad2-F (GA908) Q4275
250 260 270 280
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241 C T C T C C T A C T T C G C C T G G C C T C T C T A C T G G G C C T G C C A G G Fad2-D (GA316) IMC 129
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241 C T C T C C T A C T T C G C C T G G C C T C T C T A C T G G G C C T G C C A A G Fad2-F (GA908) Q4275
290 300 310 320
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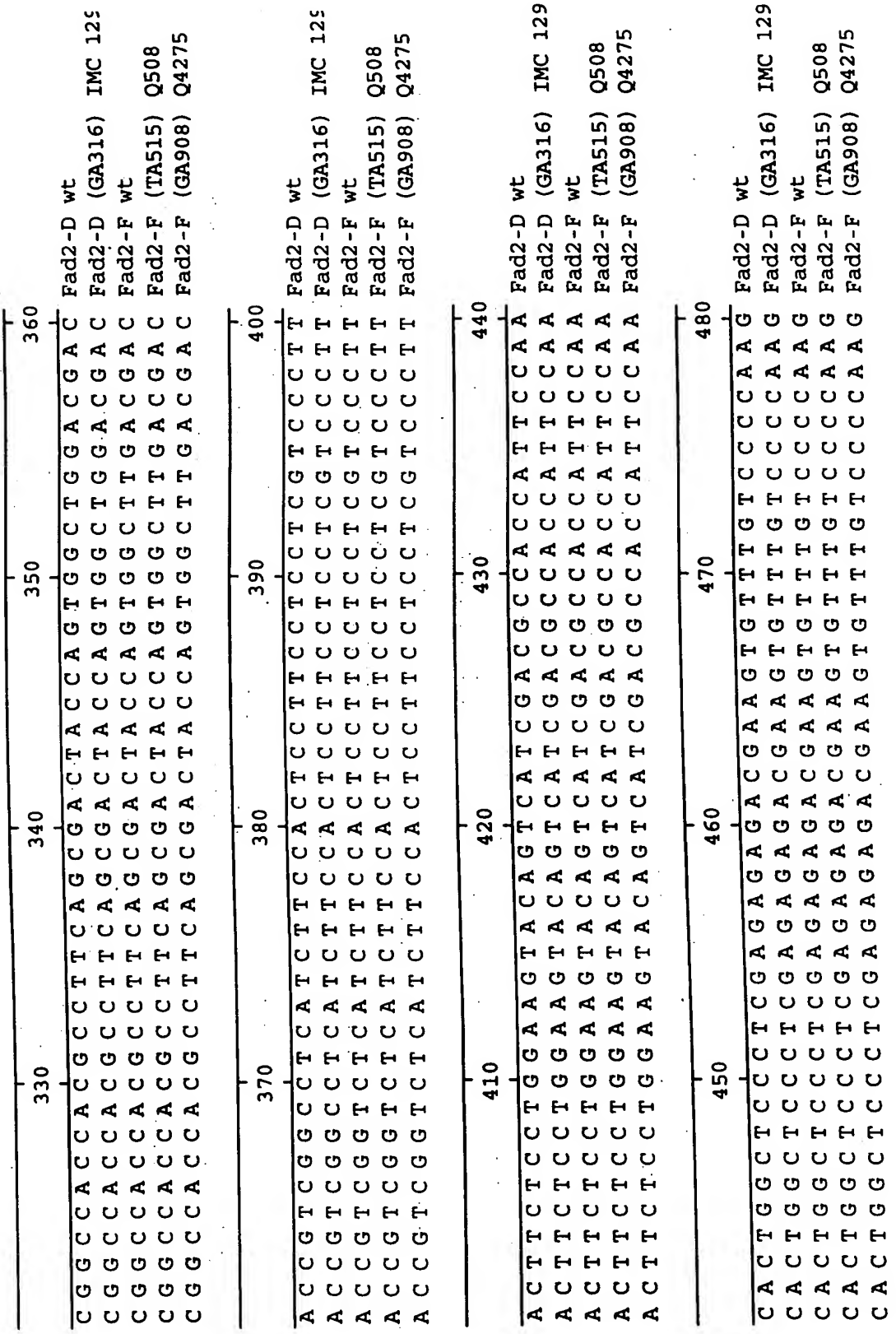
Fig. 2B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321 CGGGCCACCACGCCTTCAGCGACCTACCAGTGGCTTGACGAC Fad2-F (GA908) Q4275
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401 ACTTCTCCTGGAAGTACAGTCGACGCCACCCATTCCAA Fad2-F (GA908) Q4275
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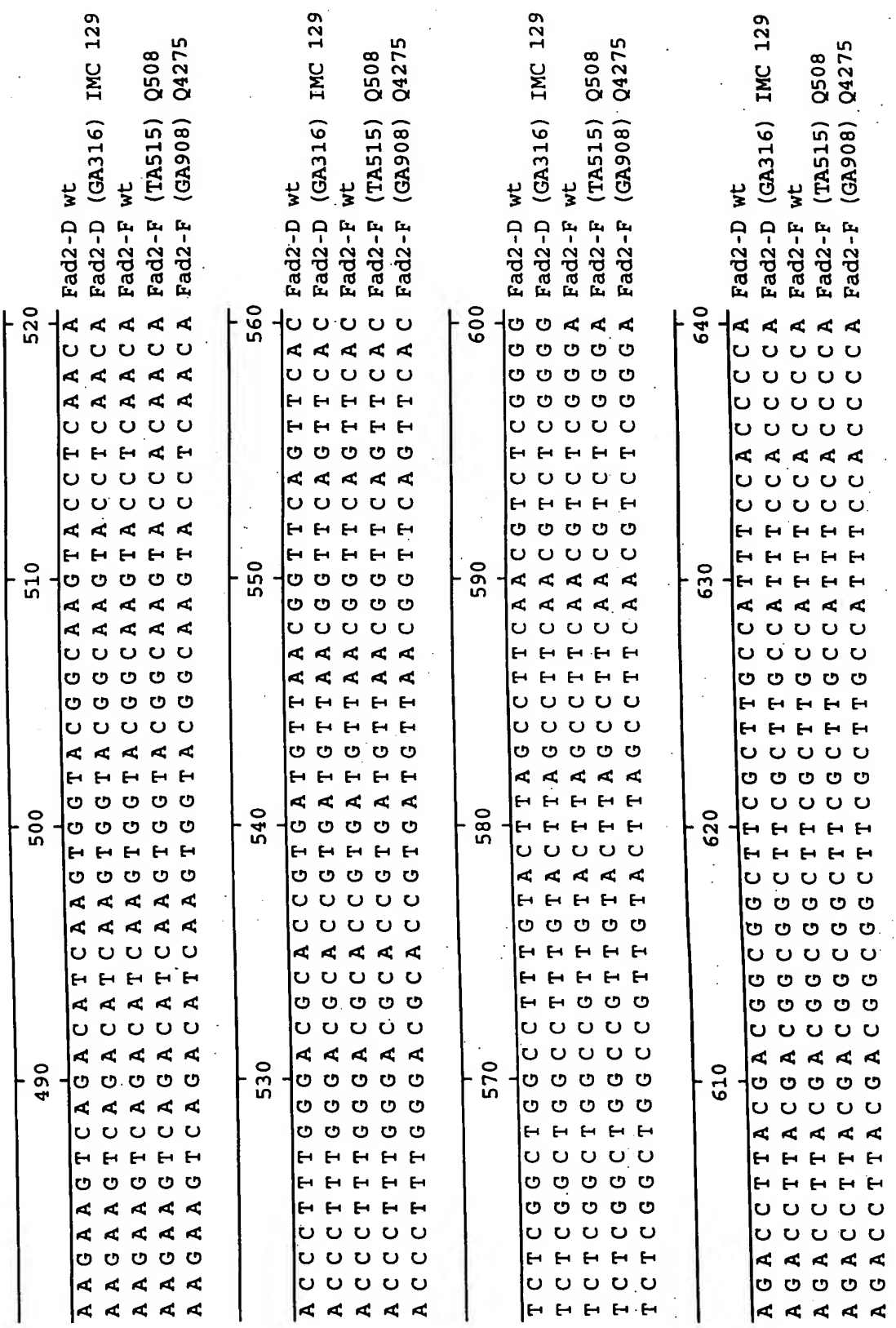
Fig. 2C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481 AAGAAAGTCAGACATCAAGTGGTACGGCAAGTACCTCAACACA Fad2-F wt
481 AAGAAAGTCAGACATCAAGTGGTACGGCAAGTACCTCAACACA Fad2-F (TA515) Q508
481 AAGAAAGTCAGACATCAAGTGGTACGGCAAGTACCTCAACACA Fad2-F (GA908) Q4275
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521 ACCCTTTGGGACGCACCGTGATGTTAACGGTTCAGTTCACC Fad2-F (GA908) Q4275
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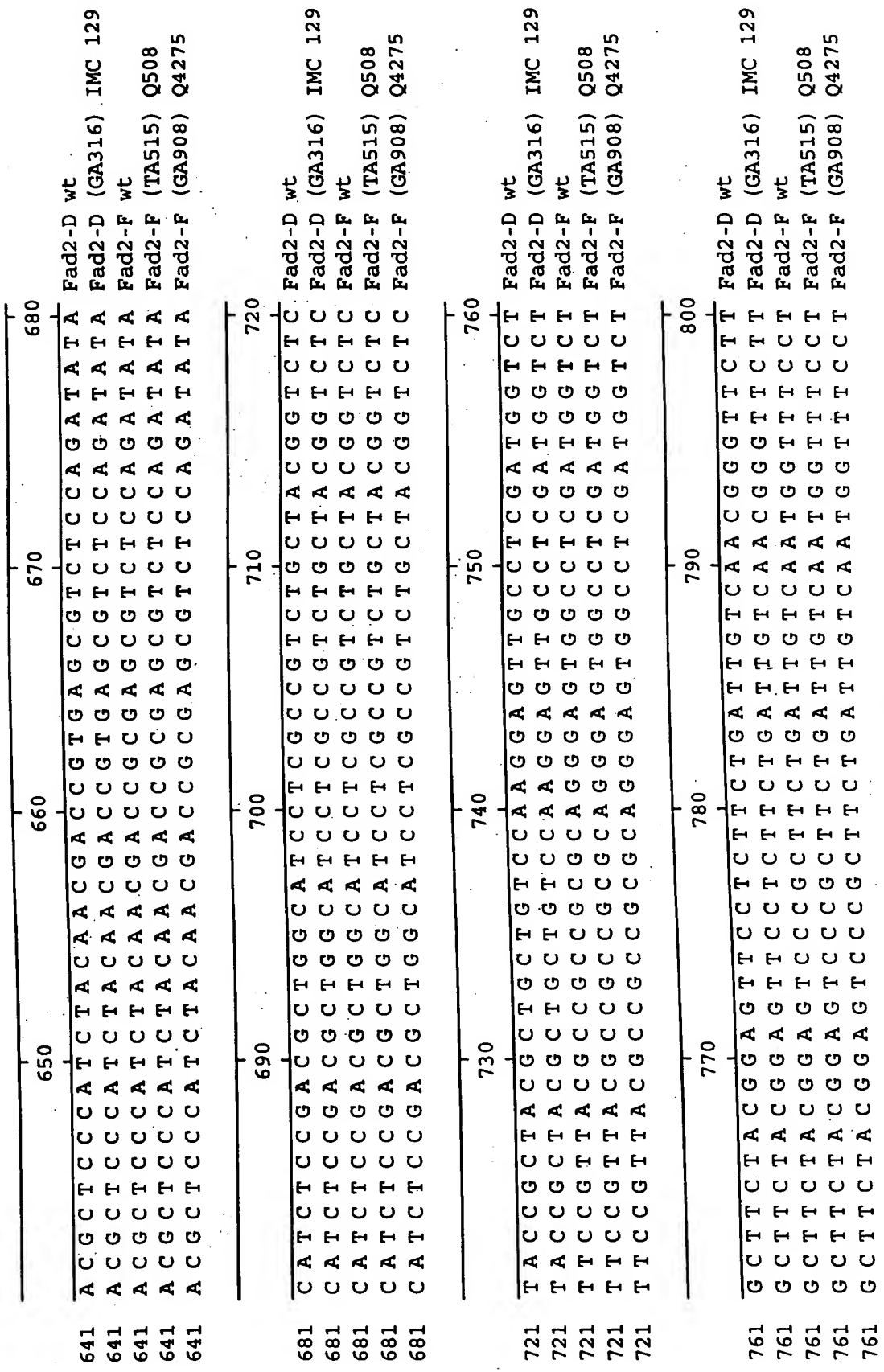
Fig. 2D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641 ACGCTCCCATCTACAACGACCGCGAGCGTCTCCAGATATA Fad2-F wt
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641 ACGCTCCCATCTACAACGACCGCGAGCGTCTCCAGATATA Fad2-F (GA908) Q4275
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721 TTCCGTTACGCCGCAGGGAGTGGCCTCGATGGTCT Fad2-F wt
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721 TTCCGTTACGCCGCAGGGAGTGGCCTCGATGGTCT Fad2-F (GA908) Q4275
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761 GCTTCTACGGAGTTCCTCTTCTGATTGTCAATGGTTCCT Fad2-F wt
761 GCTTCTACGGAGTCCCGCTTCTGATTGTCAATGGTTCCT Fad2-F (TA515) Q508
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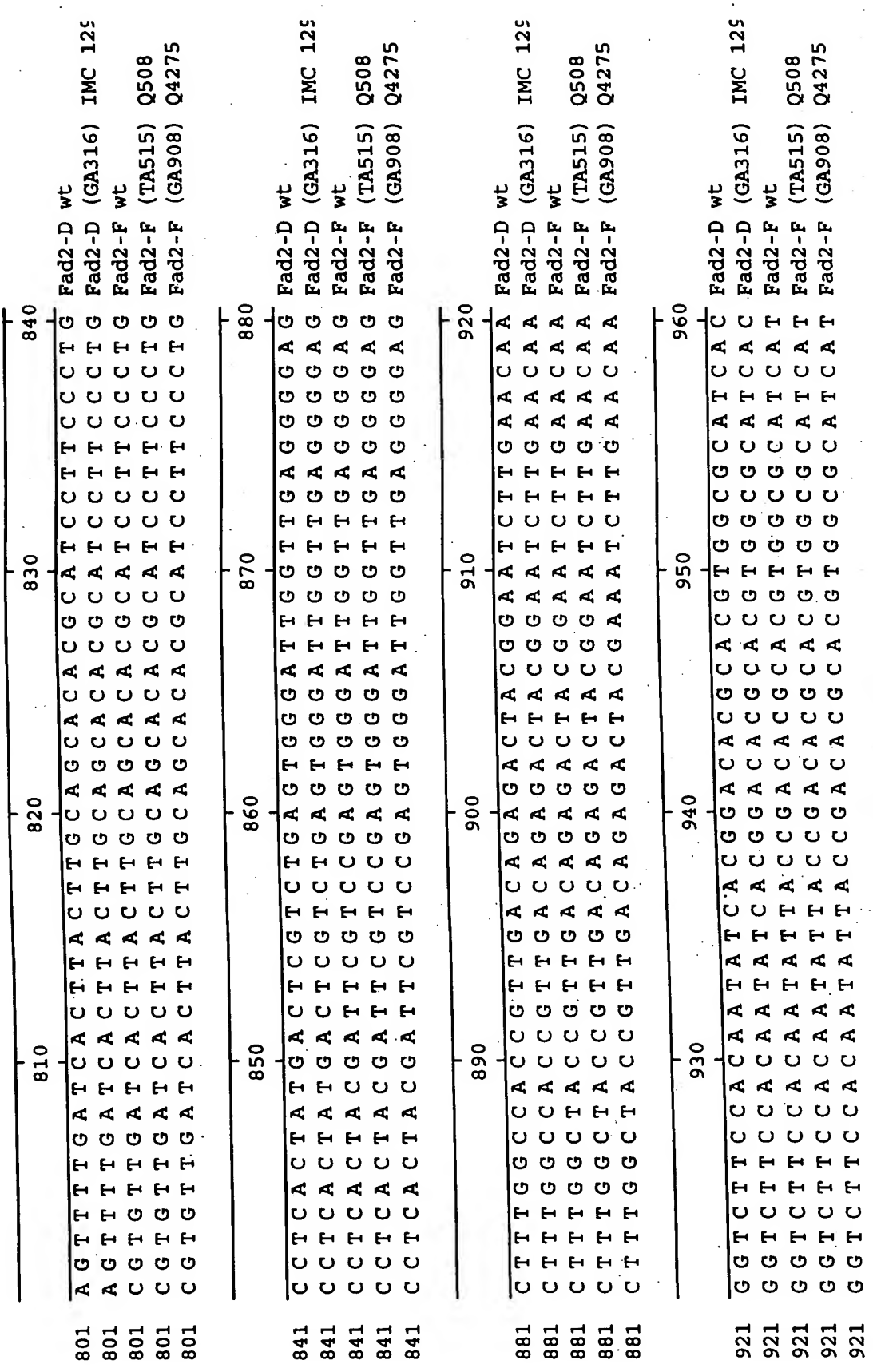
Fig. 2E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960
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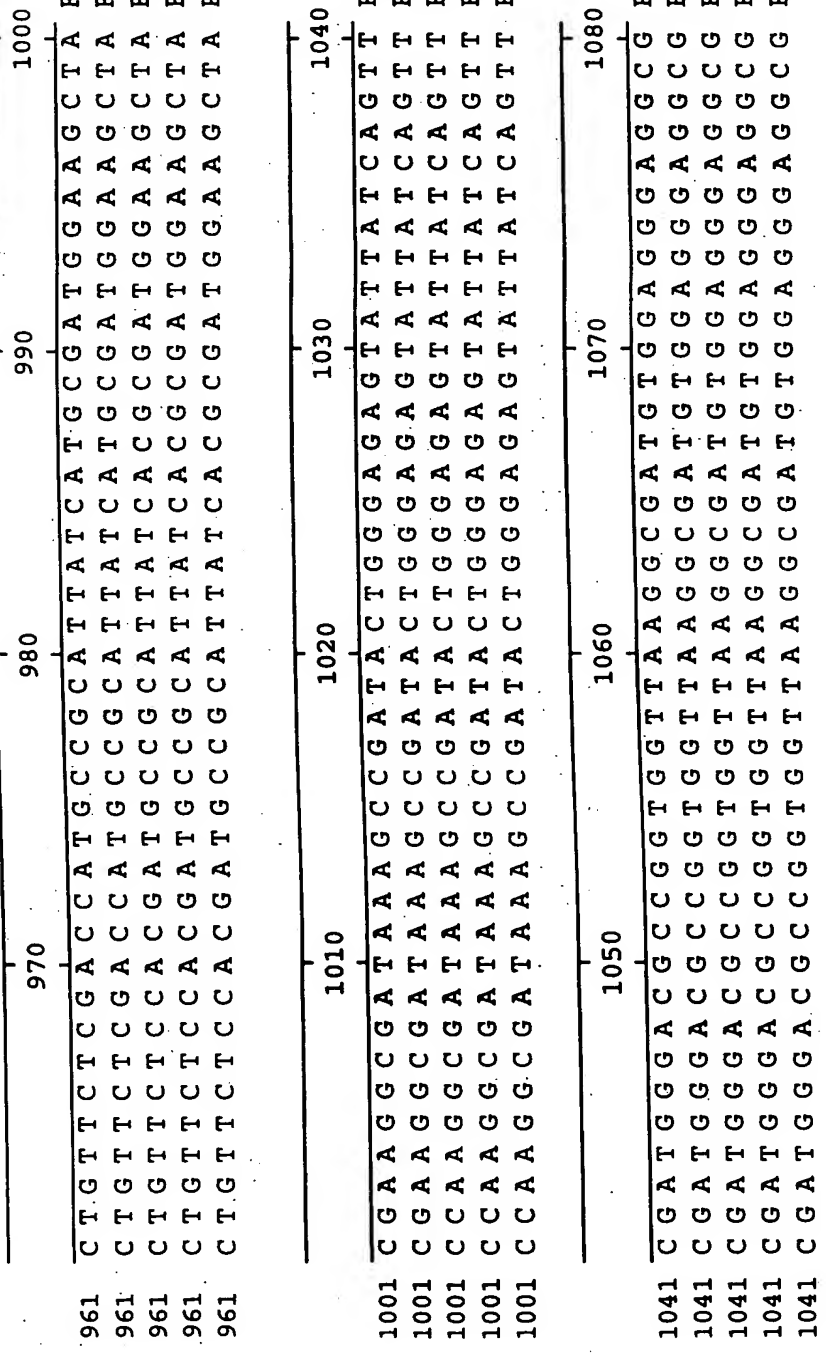
Fad2-D (GA316) IMC 125
Fad2-F wt
Fad2-F (TA515) Q508
Fad2-F (GA908) Q4275

Fig. 2J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980
990
1000
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961 CTGTTCTTCCACGATGCCGCATTATCACGCGATGGAAGCTA Fad2-F wt
961 CTGTTCTTCCACGATGCCGCATTATCACGCGATGGAAGCTA Fad2-F (TA515) Q508
961 CTGTTCTTCCACGATGCCGCATTATCACGCGATGGAAGCTA Fad2-F (GA908) Q4275
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1020
1030
1040
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1001 CCAAGGCGATAAAGCCGATACTGGGAGAGTATTATCAGTT Fad2-F wt
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1001 CCAAGGCGATAAAGCCGATACTGGGAGAGTATTATCAGTT Fad2-F (GA908) Q4275
1050
1060
1070
1080
1041 CGATGGGACGCCGGTTAAGGCGATGTGGAGGGCG Fad2-D wt
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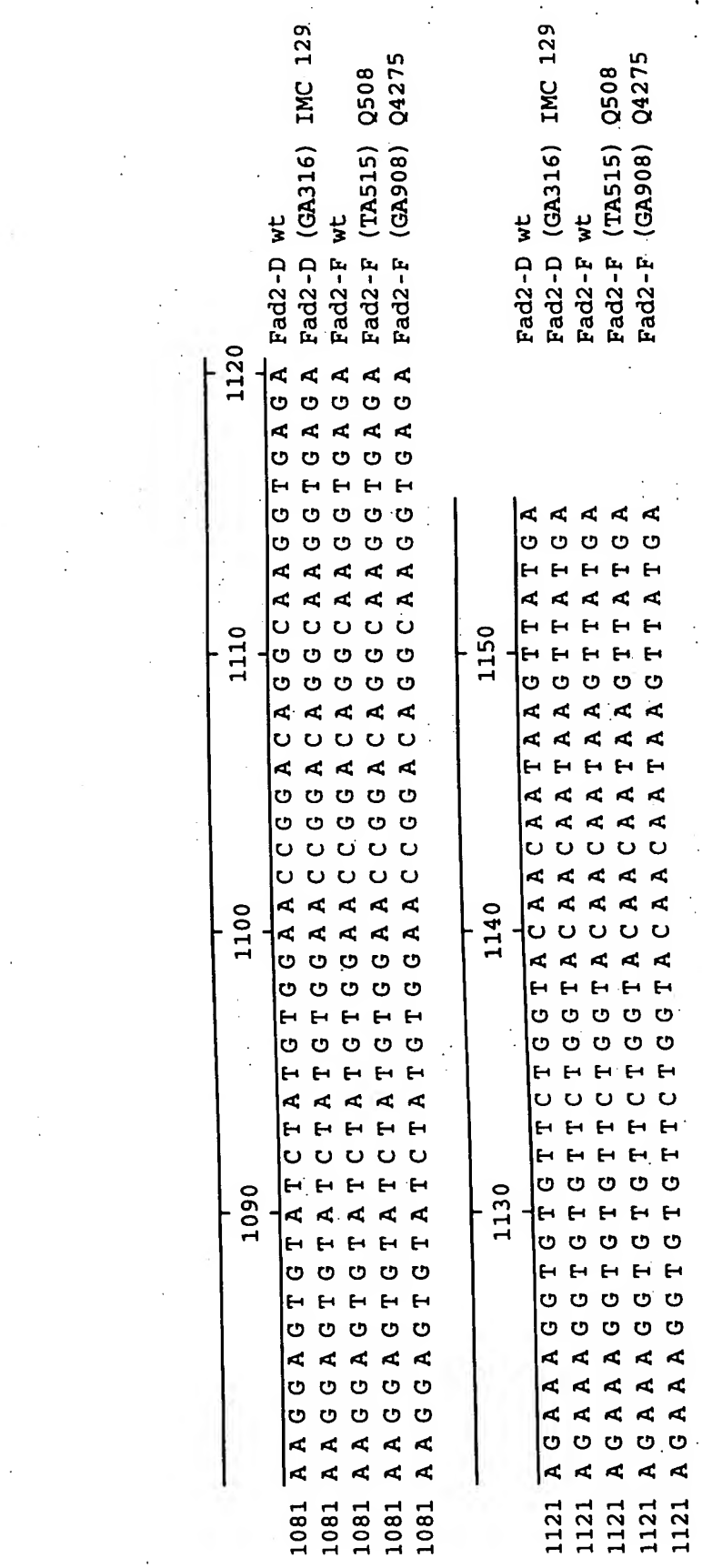
Fig. 2G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1121 AGAAAAGGTGTTCTGGTACAACAATAAGTTATGA Fad2-F wt
1121 AGAAAAGGTGTTCTGGTACAACAATAAGTTATGA Fad2-F (TA515) Q508
1121 AGAAAAGGTGTTCTGGTACAACAATAAGTTATGA Fad2-F (GA908) Q4275

Fig. 2H

```
                    10                  20
1   Met Gly Ala Gly Gly Arg Met Gln Val Ser Pro Pro Ser Lys Lys Ser Glu Thr Asp Asn  Fad2-D wt
1   Met Gly Ala Gly Gly Arg Met Gln Val Ser Pro Pro Ser Lys Lys Ser Glu Thr Asp Asn  Fad2-D (GA316) IMC129
1   Met Gly Ala Gly Gly Arg Met Gln Val Ser Pro Pro Ser Lys Lys Ser Glu Thr Asp Thr  Fad2-F wt
1   Met Gly Ala Gly Gly Arg Met Gln Val Ser Pro Pro Ser Lys Lys Ser Glu Thr Asp Thr  Fad2-F (TA515) Q508
1   Met Gly Ala Gly Gly Arg Met Gln Val Ser Pro Pro Ser Lys Lys Ser Glu Thr Asp Thr  Fad2-F (GA908) Q4275

                    30                  40
21  Ile Lys Arg Val Pro Cys Glu Thr Pro Pro Phe Thr Val Gly Glu Leu Lys Lys Ala Ile  Fad2-D wt
21  Ile Lys Arg Val Pro Cys Glu Thr Pro Pro Phe Thr Val Gly Glu Leu Lys Lys Ala Ile  Fad2-D (GA316) IMC129
21  Ile Lys Arg Val Pro Cys Glu Thr Pro Pro Phe Thr Val Gly Glu Leu Lys Lys Ala Ile  Fad2-F wt
21  Ile Lys Arg Val Pro Cys Glu Thr Pro Pro Phe Thr Val Gly Glu Leu Lys Lys Ala Ile  Fad2-F (TA515) Q508
21  Ile Lys Arg Val Pro Cys Glu Thr Pro Pro Phe Thr Val Gly Glu Leu Lys Lys Ala Ile  Fad2-F (GA908) Q4275

                    50                  60
41  Pro Pro His Cys Phe Lys Arg Ser Ile Pro Arg Ser Phe Ser Tyr Leu Ile Trp Asp Ile  Fad2-D wt
41  Pro Pro His Cys Phe Lys Arg Ser Ile Pro Arg Ser Phe Ser Tyr Leu Ile Trp Asp Ile  Fad2-D (GA316) IMC129
41  Pro Pro His Cys Phe Lys Arg Ser Ile Pro Arg Ser Phe Ser Tyr Leu Ile Trp Asp Ile  Fad2-F wt
41  Pro Pro His Cys Phe Lys Arg Ser Ile Pro Arg Ser Phe Ser Tyr Leu Ile Trp Asp Ile  Fad2-F (TA515) Q508
41  Pro Pro His Cys Phe Lys Arg Ser Ile Pro Arg Ser Phe Ser Tyr Leu Ile Trp Asp Ile  Fad2-F (GA908) Q4275

                    70                  80
61  Ile Ile Ala Ser Cys Phe Tyr Tyr Val Ala Thr Thr Tyr Phe Pro Leu Leu Pro His Pro  Fad2-D wt
61  Ile Ile Ala Ser Cys Phe Tyr Tyr Val Ala Thr Thr Tyr Phe Pro Leu Leu Pro His Pro  Fad2-D (GA316) IMC129
61  Ile Ile Ala Ser Cys Phe Tyr Tyr Val Ala Thr Thr Tyr Phe Pro Leu Leu Pro His Pro  Fad2-F wt
61  Ile Ile Ala Ser Cys Phe Tyr Tyr Val Ala Thr Thr Tyr Phe Pro Leu Leu Pro His Pro  Fad2-F (TA515) Q508
61  Ile Ile Ala Ser Cys Phe Tyr Tyr Val Ala Thr Thr Tyr Phe Pro Leu Leu Pro His Pro  Fad2-F (GA908) Q4275
```

Fig. 3A

```
                                  90                  100
81  Leu Ser Tyr Phe Ala Trp Pro Leu Tyr Trp Ala Cys Gln Gly Cys Val Leu Thr Gly Val  Fad2-D wt
81  Leu Ser Tyr Phe Ala Trp Pro Leu Tyr Trp Ala Cys Gln Gly Cys Val Leu Thr Gly Val  Fad2-D (GA316) IMC129
81  Leu Ser Tyr Phe Ala Trp Pro Leu Tyr Trp Ala Cys Gln Gly Cys Val Leu Thr Gly Val  Fad2-F wt
81  Leu Ser Tyr Phe Ala Trp Pro Leu Tyr Trp Ala Cys Gln Gly Cys Val Leu Thr Gly Val  Fad2-F (TA515) Q508
81  Leu Ser Tyr Phe Ala Trp Pro Leu Tyr Trp Ala Cys Gln Gly Cys Val Leu Thr Gly Val  Fad2-F (GA908) Q4275

                                 110                  120
101 Trp Val Ile Ala His Glu Cys Gly His His Ala Phe Ser Asp Tyr Gln Trp Leu Asp Asp  Fad2-D wt
101 Trp Val Ile Ala His Lys Cys Gly His His Ala Phe Ser Asp Tyr Gln Trp Leu Asp Asp  Fad2-D (GA316) IMC129
101 Trp Val Ile Ala His Glu Cys Gly His His Ala Phe Ser Asp Tyr Gln Trp Leu Asp Asp  Fad2-F wt
101 Trp Val Ile Ala His Glu Cys Gly His His Ala Phe Ser Asp Tyr Gln Trp Leu Asp Asp  Fad2-F (TA515) Q508
101 Trp Val Ile Ala His Glu Cys Gly His His Ala Phe Ser Asp Tyr Gln Trp Leu Asp Asp  Fad2-F (GA908) Q4275

                                 130                  140
121 Thr Val Gly Leu Ile Phe His Ser Phe Leu Leu Val Pro Tyr Phe Ser Trp Lys Tyr Ser  Fad2-D wt
121 Thr Val Gly Leu Ile Phe His Ser Phe Leu Leu Val Pro Tyr Phe Ser Trp Lys Tyr Ser  Fad2-D (GA316) IMC129
121 Thr Val Gly Leu Ile Phe His Ser Phe Leu Leu Val Pro Tyr Phe Ser Trp Lys Tyr Ser  Fad2-F wt
121 Thr Val Gly Leu Ile Phe His Ser Phe Leu Leu Val Pro Tyr Phe Ser Trp Lys Tyr Ser  Fad2-F (TA515) Q508
121 Thr Val Gly Leu Ile Phe His Ser Phe Leu Leu Val Pro Tyr Phe Ser Trp Lys Tyr Ser  Fad2-F (GA908) Q4275

                                 150                  160
141 His Arg Arg His His Ser Asn Thr Gly Ser Leu Glu Arg Asp Glu Val Phe Val Pro Lys  Fad2-D wt
141 His Arg Arg His His Ser Asn Thr Gly Ser Leu Glu Arg Asp Glu Val Phe Val Pro Lys  Fad2-D (GA316) IMC129
141 His Arg Arg His His Ser Asn Thr Gly Ser Leu Glu Arg Asp Glu Val Phe Val Pro Lys  Fad2-F wt
141 His Arg Arg His His Ser Asn Thr Gly Ser Leu Glu Arg Asp Glu Val Phe Val Pro Lys  Fad2-F (TA515) Q508
141 His Arg Arg His His Ser Asn Thr Gly Ser Leu Glu Arg Asp Glu Val Phe Val Pro Lys  Fad2-F (GA908) Q4275
```

Fig. 3B

```
                                  170                                 180
161 Lys Lys Ser Asp Ile Lys Trp Tyr Gly Lys Tyr Leu Asn Asn Pro Leu Gly Arg Thr Val  Fad2-D wt
161 Lys Lys Ser Asp Ile Lys Trp Tyr Gly Lys Tyr Leu Asn Asn Pro Leu Gly Arg Thr Val  Fad2-D (GA316) IMC129
161 Lys Lys Ser Asp Ile Lys Trp Tyr Gly Lys Tyr Leu Asn Asn Pro Leu Gly Arg Thr Val  Fad2-F wt
161 Lys Lys Ser Asp Ile Lys Trp Tyr Gly Lys Tyr His Asn Asn Pro Leu Gly Arg Thr Val  Fad2-F (TA515) Q508
161 Lys Lys Ser Asp Ile Lys Trp Tyr Gly Lys Tyr Leu Asn Asn Pro Leu Gly Arg Thr Val  Fad2-F (GA908) Q4275

                                  190                                 200
181 Met Leu Thr Val Gln Phe Thr Leu Gly Trp Pro Leu Tyr Leu Ala Phe Asn Val Ser Gly  Fad2-D wt
181 Met Leu Thr Val Gln Phe Thr Leu Gly Trp Pro Leu Tyr Leu Ala Phe Asn Val Ser Gly  Fad2-D (GA316) IMC129
181 Met Leu Thr Val Gln Phe Thr Leu Gly Trp Pro Leu Tyr Leu Ala Phe Asn Val Ser Gly  Fad2-F wt
181 Met Leu Thr Val Gln Phe Thr Leu Gly Trp Pro Leu Tyr Leu Ala Phe Asn Val Ser Gly  Fad2-F (TA515) Q508
181 Met Leu Thr Val Gln Phe Thr Leu Gly Trp Pro Leu Tyr Leu Ala Phe Asn Val Ser Gly  Fad2-F (GA908) Q4275

                                  210                                 220
201 Arg Pro Tyr Asp Gly Gly Phe Ala Cys His Phe His Pro Asn Ala Pro Ile Tyr Asn Asp  Fad2-D wt
201 Arg Pro Tyr Asp Gly Gly Phe Ala Cys His Phe His Pro Asn Ala Pro Ile Tyr Asn Asp  Fad2-D (GA316) IMC129
201 Arg Pro Tyr Asp Gly Gly Phe Ala Cys His Phe His Pro Asn Ala Pro Ile Tyr Asn Asp  Fad2-F wt
201 Arg Pro Tyr Asp Gly Gly Phe Ala Cys His Phe His Pro Asn Ala Pro Ile Tyr Asn Asp  Fad2-F (TA515) Q508
201 Arg Pro Tyr Asp Gly Gly Phe Ala Cys His Phe His Pro Asn Ala Pro Ile Tyr Asn Asp  Fad2-F (GA908) Q4275

                                  230                                 240
221 Arg Glu Arg Leu Gln Ile Tyr Ile Ser Asp Ala Gly Ile Leu Ala Val Cys Tyr Gly Leu  Fad2-D wt
221 Arg Glu Arg Leu Gln Ile Tyr Ile Ser Asp Ala Gly Ile Leu Ala Val Cys Tyr Gly Leu  Fad2-D (GA316) IMC129
221 Arg Glu Arg Leu Gln Ile Tyr Ile Ser Asp Ala Gly Ile Leu Ala Val Cys Tyr Gly Leu  Fad2-F wt
221 Arg Glu Arg Leu Gln Ile Tyr Ile Ser Asp Ala Gly Ile Leu Ala Val Cys Tyr Gly Leu  Fad2-F (TA515) Q508
221 Arg Glu Arg Leu Gln Ile Tyr Ile Ser Asp Ala Gly Ile Leu Ala Val Cys Tyr Gly Leu  Fad2-F (GA908) Q4275
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Fig. 3C

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                                  250                 260
241 Tyr Arg Tyr Ala Ala Val Gln Gly Val Ala Ser Met Val Cys Phe Tyr Gly Val Pro Leu Fad2-D wt
241 Tyr Arg Tyr Ala Ala Val Gln Gly Val Ala Ser Met Val Cys Phe Tyr Gly Val Pro Leu Fad2-D (GA316) IMC129
241 Phe Arg Tyr Ala Ala Ala Gln Gly Val Ala Ser Met Val Cys Phe Tyr Gly Val Pro Leu Fad2-F wt
241 Phe Arg Tyr Ala Ala Ala Gln Gly Val Ala Ser Met Val Cys Phe Tyr Gly Val Pro Leu Fad2-F (TA515) Q508
241 Phe Arg Tyr Ala Ala Ala Gln Gly Val Ala Ser Met Val Cys Phe Tyr Gly Val Pro Leu Fad2-F (GA908) Q4275

                                  270                 280
261 Leu Ile Val Asn Gly Phe Leu Val Leu Ile Thr Tyr Leu Gln His Thr His Pro Ser Leu Fad2-D wt
261 Leu Ile Val Asn Gly Phe Leu Val Leu Ile Thr Tyr Leu Gln His Thr His Pro Ser Leu Fad2-D (GA316) IMC129
261 Leu Ile Val Asn Gly Phe Leu Val Leu Ile Thr Tyr Leu Gln His Thr His Pro Ser Leu Fad2-F wt
261 Leu Ile Val Asn Gly Phe Leu Val Leu Ile Thr Tyr Leu Gln His Thr His Pro Ser Leu Fad2-F (TA515) Q508
261 Leu Ile Val Asn Gly Phe Leu Val Leu Ile Thr Tyr Leu Gln His Thr His Pro Ser Leu Fad2-F (GA908) Q4275

                                  290                 300
281 Pro His Tyr Asp Ser Ser Glu Trp Asp Trp Leu Arg Gly Ala Leu Ala Thr Val Asp Arg Fad2-D wt
281 Pro His Tyr Asp Ser Ser Glu Trp Asp Trp Leu Arg Gly Ala Leu Ala Thr Val Asp Arg Fad2-D (GA316) IMC129
281 Pro His Tyr Asp Ser Ser Glu Trp Asp Trp Leu Arg Gly Ala Leu Ala Thr Val Asp Arg Fad2-F wt
281 Pro His Tyr Asp Ser Ser Glu Trp Asp Trp Leu Arg Gly Ala Leu Ala Thr Val Asp Arg Fad2-F (TA515) Q508
281 Pro His Tyr Asp Ser Ser Glu Trp Asp Trp Leu Arg Gly Ala Leu Ala Thr Val Asp Arg Fad2-F (GA908) Q4275

                                  310                 320
301 Asp Tyr Gly Ile Leu Asn Lys Val Phe His Asn Ile Thr Asp Thr His Val Ala His His Fad2-D wt
301 Asp Tyr Gly Ile Leu Asn Lys Val Phe His Asn Ile Thr Asp Thr His Val Ala His His Fad2-D (GA316) IMC129
301 Asp Tyr Gly Ile Leu Asn Lys Val Phe His Asn Ile Thr Asp Thr His Val Ala His His Fad2-F wt
301 Asp Tyr Gly Ile Leu Asn Lys Val Phe His Asn Ile Thr Asp Thr His Val Ala His His Fad2-F (TA515) Q508
301 Asp Tyr Glu Ile Leu Asn Lys Val Phe His Asn Ile Thr Asp Thr His Val Ala His His Fad2-F (GA908) Q4275
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Fig. 3D

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                                  330                                 340
321 Leu Phe Ser Thr Met Pro His Tyr His Ala Met Glu Ala Thr Lys Ala Ile Lys Pro Ile  Fad2-D wt
321 Leu Phe Ser Thr Met Pro His Tyr His Ala Met Glu Ala Thr Lys Ala Ile Lys Pro Ile  Fad2-D (GA316) IMC129
321 Leu Phe Ser Thr Met Pro His Tyr His Ala Met Glu Ala Thr Lys Ala Ile Lys Pro Ile  Fad2-F wt
321 Leu Phe Ser Thr Met Pro His Tyr His Ala Met Glu Ala Thr Lys Ala Ile Lys Pro Ile  Fad2-F (TA515) Q508
321 Leu Phe Ser Thr Met Pro His Tyr His Ala Met Glu Ala Thr Lys Ala Ile Lys Pro Ile  Fad2-F (GA908) Q4275

                                  350                                 360
341 Leu Gly Glu Tyr Tyr Gln Phe Asp Gly Thr Pro Val Val Lys Ala Met Trp Arg Glu Ala  Fad2-D wt
341 Leu Gly Glu Tyr Tyr Gln Phe Asp Gly Thr Pro Val Val Lys Ala Met Trp Arg Glu Ala  Fad2-D (GA316) IMC129
341 Leu Gly Glu Tyr Tyr Gln Phe Asp Gly Thr Pro Val Val Lys Ala Met Trp Arg Glu Ala  Fad2-F wt
341 Leu Gly Glu Tyr Tyr Gln Phe Asp Gly Thr Pro Val Val Lys Ala Met Trp Arg Glu Ala  Fad2-F (TA515) Q508
341 Leu Gly Glu Tyr Tyr Gln Phe Asp Gly Thr Pro Val Val Lys Ala Met Trp Arg Glu Ala  Fad2-F (GA908) Q4275

                                  370                                 380
361 Lys Glu Cys Ile Tyr Val Glu Pro Asp Arg Gln Gly Glu Lys Lys Gly Val Phe Trp Tyr  Fad2-D wt
361 Lys Glu Cys Ile Tyr Val Glu Pro Asp Arg Gln Gly Glu Lys Lys Gly Val Phe Trp Tyr  Fad2-D (GA316) IMC129
361 Lys Glu Cys Ile Tyr Val Glu Pro Asp Arg Gln Gly Glu Lys Lys Gly Val Phe Trp Tyr  Fad2-F wt
361 Lys Glu Cys Ile Tyr Val Glu Pro Asp Arg Gln Gly Glu Lys Lys Gly Val Phe Trp Tyr  Fad2-F (TA515) Q508
361 Lys Glu Cys Ile Tyr Val Glu Pro Asp Arg Gln Gly Glu Lys Lys Gly Val Phe Trp Tyr  Fad2-F (GA908) Q4275

381 Asn Asn Lys Leu ter                                                             Fad2-D wt
381 Asn Asn Lys Leu ter                                                             Fad2-D (GA316) IMC129
381 Asn Asn Lys Leu ter                                                             Fad2-F wt
381 Asn Asn Lys Leu ter                                                             Fad2-F (TA515) Q508
381 Asn Asn Lys Leu ter                                                             Fad2-F (GA908) Q4275
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Fig. 3E